San José State University
Department of Psychology
Statistics 115-01
Intermediate Statistics
Fall 2023

Contact Information

Instructor:	Dr. Megumi Hosoda
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Office Hours:	M 11:00 a.m. – 11:45 a.m. W 3:30 p.m. – 4:15 p.m. or by appointment
Class Days/Time:	M W 12:00p.m. – 1:15p.m. DMH355

Course Description and Requisites

Statistical analysis at the intermediate level; descriptive statistics, t-statistic, chi-square, analysis of variance, correlation and regression, and topics in experimental design; use of a statistical program, Statistical Package for Social Sciences (SPSS) 26, 27, 28 or 29 for Windows, for statistical analyses and interpretation.

Prerequisite: Stat 95 (or equivalent)

Course Goals

The major goal of this course is to provide you with the solid foundation in statistics, by introducing you to the various types of statistics used in psychology and other social sciences. You will understand the logic and strategies of scientific research designs and will learn how to use appropriate inferential statistics to make sense out of data. At the end of the course, you should be able to understand the "what, when, and how" of statistics. That is, you will learn what statistics are available, when to use specific statistics, and how to interpret results.

Course Learning Outcomes (CLOs)

Upon successful completion of this course, you will be able to:

CLO1 - Understand the logic of statistical concepts
- This objective is met through lectures

CLO2 - Use appropriate statistical methods to solve quantitative problems and test hypotheses
- This objective is met through lectures and homework assignments

CLO3 - Understand the logic and strategies of scientific research designs
- This objective is met through lectures and homework assignments

CLO4 - Run statistical analyses using SPSS and interpret statistical information presented in SPSS output
- This objective is met through lectures and homework assignments

Course Materials

Required Texts/Readings

Textbook

Gravetter, F. J. & Wallnau, L. B. (2017). *Statistics for the Behavioral Sciences* (10th ed.). Boston, MA: Cengage Learning (ISBN 978-1-305-50491-2).

Here are the Instructions and Video on how to access your book from Canvas:
https://startstrong.cengage.com/etextbooks-resources-ia-no/

1. **eBook:** STATISTICS BEHAVIORAL SCIENCES10e by Gravetter 10e **Price:** $49.49 **ISBN:** 9780357685839
2. **eBook + physical book (1 term):** Cengage Unlimited eTextbook subscription. ONLY $69.99 (+$9.99 physical book rental) for 1 semester, you get access to ALL your Cengage 14,000 eBook

Option 3: A used physical book (10th edition or 9th edition)

Other Material Requirements

SPSS
SPSS is free to download. Instructions on how to download SPSS on your computer are posted on Canvas. Make sure to use your SJSU email account, NOT your personal email.

Calculator
You will need a calculator. It does not need to be a scientific one but has to have the square root button. You will also need four SCANTRON FORM NO.882-E sheets for exams.

Other Resources

Stat Tutor Availability
Peer Connections
You need to make an appointment to see a tutor through calling the office at (408) 924-2587 or online (http://peerconnections.sjsu.edu/).

Course Requirements and Assignments

"Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading." (University policy F 69-24).

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internship, labs, and clinical practica.

Grading Information

Your letter grade for this course will be based on a total score obtained from four exams and 13 homework assignments (a total point might change due to a change in schedule).

Examinations (430 points)(tentative)
There will be four examinations. These exams will test your knowledge and understanding of course material and be based on the lectures and reading. The exams will consist of multiple-choice, short answer, and computational questions. The final exam (Exam 4) will NOT be cumulative. Remember to bring a #2 pencil, an eraser, a calculator, and a scantron (No. 882-E) for each exam. You can bring a cheat sheet (8.5" x 11" paper size; front and back, type-written or hand-written) to each exam.

For computational questions, it is important to show **all** of your work and the steps you undergo to arrive at your answer in order to receive at least partial or full credit.

Homework Assignments (273 points)(tentative)
There will be a total of 13 homework assignments. Homework assignments will require either hand calculations and/or SPSS statistical analyses (the number of homework assignment might change due to a change in schedule). Some assignments might require

producing a brief result section in APA style and/or graphing. Due dates are listed for the assignment at the end of the syllabus.

Although I prefer that you turn each assignment physically in class, it may be submitted to Canvas in a **pdf file**. Rather than sending each page in a pdf file, please send each assignment in one pdf file or assignments in one pdf file. To the extent possible, please do NOT take the pictures of assignment pages and send them to me. You can only write answers to questions on a separate paper, scan it in a pdf file, and send it to me through Canvas. When you write your answers, please write your answers intelligibly.

Extra Credit
There will be four bonus homework assignments and bonus questions on some exams.

Grade breakdown

Four examinations	430 pts (61%)(tentative)
Homework assignments	273 pts (39%)(tentative)

Total Point Possible	703 (tentative)

Grade	Range
A+	97% to 100%
A	93% to 96%
A-	90% to 92%
B+	87% to 89%
B	83% to 86%
B-	80% to 82%
C+	77% to 79%
C	73% to 76%
C-	70% to 72%
D+	67% to 69%
D	63% to 66%
D-	60% to 62%
F	< 60%

Assignments and Grading Policy

Make-up exam policy
A make-up exam will be given **only** when

- The reason is exceptional, unforeseen, and unavoidable. Examples of exceptional circumstances are health emergencies, religious obligations, death in the family, and military services. Work scheduling is not a sufficient reason for a make-up.
- You can provide written documentation.
- You notify me **immediately** after you become aware of the circumstances requiring a make-up exam (either prior to the exam or within 24 hours of the scheduled exam).

- When permission is granted, a make-up exam must be completed within 6 days for the originally scheduled test date at my discretion at the testing center.

A late homework assignment will be accepted with a penalty (20% reduction)
You can turn your assignment(s) in late. However, a late homework assignment will be penalized. This means that even if you answer all of the questions correctly, your score can never be higher than 20% of the total possible points. Consequently, handing in a late homework assignment will only hurt your grade in the end. Note that you are given enough time to complete each assignment unless you wait until the last due date. Many computational questions in homework assignments are similar to those questions I ask on exams. Thus, I encourage you to turn each homework assignment in before the scheduled due date to get feedback from me.

Classroom Protocol

In an effort to create a classroom environment conducive to learning, I expect you to follow the guidelines below to help the class go smoothly and to limit the amount of distractions that occur.

1. Arrive for class on time. If you arrive late, please enter the class and take a seat as quietly as you can. Do not come in late and enter into a conversation to catch up on information you missed or expect information you missed to be repeated.
2. If you have to leave early, please do so quietly and sit next to the door so that you do not distract other students.
3. Do not carry on conversations with others during class.
4. No smart phone use for text messaging, emailing, or talking during any class!
5. Turn off all smart phones and any other devices that produce distraction before class.
6. Remove all earphones and do not listen to music or look at your instagram, facebook, twitter, etc. during class time.

Tips to help you succeed in Stat115

1. Attend all classes, arrive on time, and take good notes. The material in the course is cumulative and it becomes more complex as the semester progresses. If you miss several lectures, it will become extremely difficult for you to catch up with class. Thus, **it is very crucial that you attend all of the class periods**.
2. **Always bring your calculator to class because we spend a great amount of class time calculating**.
3. Form a study group with fellow students and study together.
4. Read assigned readings before each class; read each chapter at least twice.
5. Ask questions in class and during office hours. I am available to help anyone having difficulty in the class and/or assignments. I am your resource person.
6. Complete assignments as soon as the relevant information is presented in class
7. Make an appointment to see a tutor at Peer Connections (SSC, Room 600) if you need tutoring.

Use of Laptops in the Classroom

Laptops are permitted in the classroom for **NOTE-TAKING PURPOSES ONLY**. Use of laptops for any other purpose (e.g., non-class related activities like emailing friends, or surfing the web) will not be permitted. Students not abiding by these guidelines will be asked to turn off their laptop and will not be allowed to bring it into the classroom in the future.

University Policies

Per University Policy S16-9, relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g., learning assistance, counseling, and other resources) are listed on Syllabus Information web page (http://www.sjsu.edu/curriculum/courses/syllabus-info.php). Make sure to visit this page to review and be aware of these university policies and resources.

Academic integrity

The University Academic Integrity Policy F15-7 requires you to be honest in your academic course work. All infractions need to be reported to the office of Student Conduct and Ethical Development. For this class, all the assignments are to be completed by the individual student unless otherwise specified. If you are caught cheating on an exam, you will get a score of zero for the exam and such behavior will be reported to the university. Grade Forgiveness will not apply to courses for which the original grade was the result of a finding of academic dishonesty. You should understand that there will be negative consequences on you if you violate academic integrity.

Consent for Recording of Class and Public Sharing of Instructor Material

University Policy s12-7, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor's permission to record the course.

> "Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. This permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material."
>
> If you would like to record course lectures, please obtain my permission in writing (via email is ok) or orally and indicate whether you will record for the whole semester or on a class by class basis.

"Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor-generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent".

Student Technology Resources (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)

Computer labs for student use are available in the Academic Success Center (http://www.sjsu.edu/at/asc/) located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Computers are also available in the Martin Luther King Library. SPSS will be available in the computer labs and on laptops in the Martin Luther King Library.

SJSU Peer Connections (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)

Peer Connections, a campus-wide resource for mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

Peer Connections is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10th and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit Peer Connections website at http://peerconnections.sjsu.edu for more information.

SJSU Cares (https://www.sjsu.edu/curriculum/courses/syllabus-info.php)

Students experiencing challenges meeting their basic needs including, but not limited to, access to food, shelter, and a safe space are encouraged to contact SJSU Cares. Students who feel that their class performance may be affected by these challenges are encouraged to notify their professors, if comfortable doing so. Faculty members may be able to provide flexibility within the course for students working with a case manager.

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Course Schedule

This course will follow the syllabus to the extent possible. However, the schedule is subject to change with fair notice in class or via the Canvas messaging system.

Date	Class Topic	Reading	Assignment due
8/21 (Mon), 8/23 (Wed), 8/28(Mon), & 8/30 (Wed)	About this course Review of statistical concepts Descriptive statistics	Chs. 1 – 4	8/30 -- HW1
9/4 (Mon)	**No class -- Labor Day**		
9/6 (Wed) & 9/11 (Mon)	Introduction to SPSS z-score Normal distribution	Chs. 5 – 6	9/6 – HW2 9/11 – HW3
9/13 (Wed) & 9/18 (Mon)	Sampling distribution	Ch. 7	9/18 – HW4
9/20 (Wed)	**Exam 1 (Chs. 1– 7)**		9/21 – HW5
9/25 (Mon), 9/27 (Wed), 10/2 (Mon), 10/4 (Wed), 10/9 (Mon), & 10/11 (Wed)	Hypothesis testing t-test with one sample Independent samples t-test **Last day to turn in HW1 ~ 5 without a penalty (9/25)**	Chs. 8, 9, & 10	10/9 – HW6 10/11 – Bonus 1 10/11 – HW7
10/16 (Mon)	**Exam 2 (Chs. 8 – 10)**		10/16 – HW8 10/16 – Bonus 2
10/18 (Wed) & 10/23 (Mon)	Repeated measures t-test **Last day to turn HW6 ~ 8, and Bonus 1 in without a penalty (10/18)**	Ch. 11	

Date	Class Topic	Reading	Assignment due
10/25 (Wed) & 10/30 (Mon)	Correlation and Regression	Chs. 15 & 16	10/25 – HW9
11/1 (We)	Chi-square test	Ch. 17	
11/6 (Mon)	**Exam 3 (Chs 11, 15 & 16)**		11/6 – HW10
11/8 (Wed)	Chi-square test **Last day to turn HW9 ~ 10 in without a penalty (11/8)**		11/8 – Bonus 3
11/13 (Mon), 11/15 (Wed), 11/20 (Mon), & 11/22 (Wed)	One-way ANOVA	Ch. 12	11/13 - HW11
11/27 (Mon), 11/29 (Wed), 12/14 (Mon), & 12/6 (Wed)	Two-way ANOVA	Ch. 14	11/27 – HW12
12/14 (Thu)	**Exam 4 (Chs, 17, 12, & 14)** **9:45a.m. – 12:00p.m.** **The very last day to turn in HW 11~13 and Bonus 3 & 4 by 5p.m. Note that NO assignments will be accepted after 5:00 p.m.**		12/14 - HW 13 12/14 – Bonus 4